

Claims

I claim:

1. A Collection Extensible Action GUI process for executing an action, to be performed on or with the aid of a programmable device, comprising the following steps:

- (a) receiving an action execution request,
- (b) obtaining an action definition corresponding to said execution request; and
- (c) performing an action that is defined by said action definition in response to said action execution request,

wherein actions are comprised of optionally-parameterized, linear flow, command line work operations that are defined by named action definitions, and wherein action definitions are comprised of an action type and action attributes, and are stored within an action data storage means,

thereby providing a solution to the Collection Extensible Action GUI Problem, and thereby providing human users with a practical means for extending the functionality of graphical user interfaces in a way that was not previously possible.

2. The process of claim 1, wherein

- (a) said step of receiving an action execution request receives an action execution request from a source selected from a group consisting of human operators and external programs and a GUI program that is executing said step of receiving an action execution request,

thereby helping to solve the Collection Extensible Action GUI Problem, and thereby providing GUI interfaces with a practical means for responding to action execution requests that originate from both inside and outside the GUI program.

3. The process of claim 1, wherein

- (a) said step of performing an action execution response obtains an action

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and thereby providing a practical means for inserting lists of current data values into an action dialog as part of said action execution response.

17. The process of claim 1, wherein

(a) said step of performing an action execution response communicates action execution results to one or more destinations selected from a group consisting of computer memories and computer display screens and computer files and computer networks,

thereby helping to solve the Collection Extensible Action GUI Problem, and thereby providing a practical means for displaying and storing action execution results as part of said action execution response.

18. A programmable Collection Extensible Action GUI device for executing a GUI action, whose actions are directed by software executing a process comprising the following steps:

- (a) receiving an action execution request,
- (b) obtaining an action definition corresponding to said execution request, and
- (c) performing an action that is defined by said action definition in response to said action execution request,

wherein actions are comprised of optionally-parameterized, linear flow, command line work operations that are defined by named action definitions, and wherein action definitions are comprised of an action type and action attributes, and are stored within an action data storage means

thereby providing a solution to the Collection Extensible Action GUI Problem, and thereby providing human users with a practical means for extending the functionality of graphical user interfaces in a way that was not previously possible.

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35. A computer readable memory, encoded with data representing a Collection Extensible Action GUI program that can be used to direct a computer when used by the computer, comprising:

- (a) means for receiving an action execution request,
- (b) means for obtaining an action definition corresponding to said execution request
- (c) means for performing an action that is defined by said action definition in response to said action execution request,

wherein actions are comprised of optionally-parameterized, linear flow, command line work operations that are defined by named action definitions, and wherein action definitions are comprised of an action type and action attributes, and are stored within an action data storage means,

thereby providing a solution to the Collection Extensible Action GUI Problem, and thereby providing human users with a practical means for extending the functionality of graphical user interfaces in a way that was not previously possible.

36. The computer readable memory of claim 35, wherein

- (a) said means for receiving an action execution request receives an action request from a source selected from a group consisting of human operators and external programs and a GUI program that is executing said step of receiving an action execution request,

thereby helping to solve the Collection Extensible Action GUI Problem, and thereby providing GUI interfaces with a practical means for responding to action execution requests that originate from both inside and outside the GUI program.

37. The computer readable memory of claim 35, wherein

- (a) said means for performing an action execution response obtains an action identifier from said action execution request,

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